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Attitudes of regular elementary students toward mainstreamed handicapped peers.

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Attitudes of Regular Elementary
Students Toward Mainstreamed
Handicapped Peers

Danielle Renaud-Nardone

B.A., University of Windsor, 1984
B.Ed., University of Windsor, 1985

A. Thesis
Submitted to the Faculty of Graduate Studies
Through the Faculty of Education
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1987

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ABSTRACT

This study was an attempt to determine the attitudes of regular elementary students toward their mainstreamed handicapped peers. By attempting to extend the results of two previous similar studies it was to be further shown that attitudes have distinct dimensions.

There were 274 subjects in grades 1, 3, 5, and 7 in four schools in Southwestern Ontario. Two of the schools contained mainstreamed developmentally handicapped students, while two did not. Responses from an Acceptance Scale were factor analyzed revealing four factors, or dimensions of attitudes. A multivariate analysis of variance was then conducted to identify differences among the factors.

From these results it was concluded that exposure itself has a positive influence on attitudes and that dimensions of attitudes differ in different circumstances or situations. The results of two previous studies were successfully extended.

A discussion of the implications of this research for educators as well as ways to facilitate the mainstreaming process was included.

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CHAPTER I

INTRODUCTION

This study was conducted to explore elementary school children's attitudes toward developmentally handicapped children who are now mainstreamed into regular schools. Mainstreaming is occurring as a result of changes in the educational system in Ontario. Changes in educational trends and policies usually occur for one of three reasons:

1. changes in theoretical models;
2. changes in classification schemes; or
3. changes in legislation (Kirby & Williams, in press).

The mainstreaming movement in Ontario is a result of changes in legislation; specifically, the passing of Bill 82, or, an Amendment to the Education Act of Ontario. It was enacted at the beginning of this decade (1980) in order to provide all handicapped children with the same educational services as those which normal children receive. Bill 82 came into full effect in September of 1985 after a five-year phase-in period in which school boards were given the opportunity to prepare by making changes in policy and practice (Day, 1985).

Ontario is the most recent of six provinces to

pass mandatory legislation. The others are Newfoundland, 1979; Nova Scotia, 1969; Quebec, 1979; Manitoba, 1976; and Saskatchewan, 1971. New Brunswick, Alberta and British Columbia are considering mandatory legislation also, while P.E.I., Yukon and Northwest Territories have no such consideration as yet (Csapo & Goguen, 1980).

The first step toward mainstreaming was to integrate handicapped students into the same school systems, rather than have them continue to be serviced by private schools and schools funded by local associations for the mentally retarded. As a result, school boards have undergone major changes in an attempt to prepare for new students. Areas of change include funding for: new programs; special equipment and building modification; food provision for special needs students, who, in most cases, would remain at school for the full day; special transportation for wheelchairs and other assistive devices and, most important, additional specially trained personnel to work with these new students.

Despite the major physical and administrative changes which have been effected over the past few years, one area appears to have been given less attention

than physical and administrative change. The attitudes and feelings of the existing students in the school system toward the addition of the developmentally handicapped students has not been the subject of much research as yet.

The attitudes of parents, teachers and school administrators have received some attention, however (Horne, 1985). While these groups are important to the success of the mainstreaming process and their attitudes an important area to be explored, this study focuses on the attitudes of students. In this investigator's opinion one of the keys to successful mainstreaming lies in the acceptance of the developmentally handicapped students by their peers with whom they share not only their classrooms, lunchrooms and gymnasiums, but also, their playgrounds.

DEFINITION OF TERMS

The terms to be used throughout this thesis are:

1. Attitudes--perceptions and ideas held by subjects in this study and other previous studies.
2. Regular students--"normal" students participating in this study. They will be from grades 1, 3, 5 and 7.

3. Mainstreamed Students--those students who formerly attended segregated and/or special schools who are now being educated in a regular school either in segregated or integrated classes.
4. Developmentally Handicapped--any student who is formerly from a special school. This may include physical and/or mental handicaps, -but, in this study it most often refers to moderately and severely mentally handicapped children.

Note--In this paper the terms mainstreaming and integration are used interchangeably, and thus, mean the same.

Integration is used more frequently in citing early research and mainstreaming is used more frequently in citing later research (i.e.--post 1975).

CHAPTER II

REVIEW OF THE LITERATURE

Attitudes constitute a major area of study and there are various definitions and concepts of attitudes to consider. Allport (1935) was among the first to propose that overt behaviour could be predicted by attitudes. He defined an attitude in terms of mental and neural readiness, arising from experiences and exerting an influence on the individual's responses to related objects.

Sherif, Sherif & Nebergall (1965) similarly defined an attitude in terms of readiness to respond to a situation, stating that a social attitude is essentially a set of "evaluative categorizations formed toward an object or class of objects as the individual learns about his environment including evaluations of other persons". It is through attitude formation, that the "individual relates himself; psychologically, to these objects and his attitudes become constituent parts of his self (ego) system". Thus, there are emotional and motivational aspects which combine with the cognitive content to form attitudes (p.20).

In contrast, others have defined attitudes in

terms of positive or negative behaviour. For example, Bogardus' (1931) definition describes an attitude as "a tendency to act toward or against some environmental factor which becomes thereby a positive or negative value" (p.52).

Similarly, Triandis' (1971) definition states that "an attitude is an idea charged with emotion which predisposes a class of actions to a particular class of social situations" (p.2).

A behaviourist definition of attitudes states that an attitude is:

1. an implicit response;
2. which is both (a) anticipatory and (b) mediating in reference to patterns of overt responses,
3. which is evoked (a) by a variety of stimulus patterns (b) as a result of previous learning or of gradients of generalization and discrimination,
4. which is itself cue-and drive-producing,
5. and which is considered socially significant in the individual's society (Doob, 1967, p.43).

More simply stated by Fishbein & Ajzen (1975), an attitude is "a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object" (p.6).

There are three components of attitudes. They are: affect, cognition and conation. Affect concerns feelings (like or dislike); cognition concerns knowledge

or belief (eg.-stereotypes); and conation concerns behavioural intentions or actions towards the attitude object (Horne, 1985). Although conation has been purported to be the most measurable component of the three, Horne (1985) contends that there is, actually, a low correlation between what a person says he would do and his actual behaviour.

This then, leads one to wonder about the role of attitudes. Attitude theorists such as McGuire, (1966) posit that there are four functions of attitudes:

1. utilitarian (adaptive);
2. economy (knowledge);
3. expressive (self-realization); and
4. ego-defensive (p.35).

The utilitarian function facilitates future goal attainment and social relationships. The economic function serves as a guide to appropriate behaviour toward objects based on observation and experience. The expressive function is a means for "cathartic acting-out of inner tensions", or a way to justify one's behaviour. The ego-defensive function aids in resolving internal conflict (Horne, 1985, p.4).

Yet, there is still the question of why people develop certain attitudes. Triandis (1971) postulated four reasons. They are to:

1. help them understand the world around them, by organizing and simplifying input;
2. protect self-esteem by making it possible for them to avoid unpleasant truths about themselves;
3. help them adjust in a complex world by making it more likely that they will react so as to maximize their rewards from the environment; and
4. allow them to express their fundamental values (p.4).

As already pointed out, people formulate their attitudes from observation and experience. Children observe, not only visually, but auditorily as well, the actions of significant others and bring these observations to school with them, where they mingle with the attitudes of peers and teachers. According to Henry (1957) an elementary classroom is "one of the most powerful instruments for developing attitudes" ...and;

does not merely sustain attitudes that have been created in the home, but reinforces some, de-emphasizes others, and makes its own contribution. In this way it prepares the conditions for and contributes toward the ultimate organization of peer-and parent-directed attitudes into a dynamically interrelated attitudinal structure supportive of the culture (p.117).

In terms of the classroom environment and the attitudes contained therein, there have been programs implemented to increase awareness of developmental

handicaps prior to mainstreaming. Randolph & Harrington (1981) studied fifth grade students' responses to a question about a hypothetical physically disabled classmate and found that the most frequent response was desire to help the disabled child. This was followed secondly by pity and sorrow for the child's incapacity. Kahn (1982) has provided a series of activities designed to prepare regular students for mainstreaming. Included were nineteen activities with discussions, art sessions and field trips. Kahn strongly emphasized the need for children to express their curiosity, concerns, fears, feelings and attitudes before the handicapped students arrive so as to become more comfortable with differences among people. Lehrer (1983) studied the stereotypic conceptions of the handicapped by regular students subsequent to mainstreaming. The prediction that mainstreaming would decrease such conceptions was confirmed as the mainstreamed subjects evidenced a much greater decrease in stereotypic conceptions than did the control (nonmainstreamed) subjects. As well, there are many critiques and studies of the success of mainstreaming. Brinker & Thorpe (1983) evaluated fourteen schools with integrated severely handicapped pupils. They concluded that integration resulted in

a more positive learning environment for both handicapped and nonhandicapped students.

Alternatively, Gresham (1982) suggested that the focus for successful mainstreaming should be on social skills training for the handicapped students rather than awareness programs for the nonhandicapped. There have been several studies which employ training programs and then measure the attitudes of nonhandicapped students. (These will be discussed in further detail in chapter V).

Very few studies, however, have solely measured the attitudes which exist toward the developmentally handicapped without attempting to first modify them, or, to make them more positive (Towfighy-Hooshyar & Zingle, 1984; Voeltz, 1980). Therein lies the reason that the present study was conducted. Research to determine how regular students regard their handicapped peers is needed at this time.

Related Literature

In 1974, Sheare stated that "few researchers have concerned themselves with the acceptance of the educable mentally retarded (EMR) child who is educated within an integrated public school program " (p.678). He

cited the results of some previous attitude studies most of which reported negative attitudes of regular students toward handicapped peers.

Research suggests that over time the trend has been from generally negative attitudes to more positive ones, possibly due to integration. Beginning in the 1950's research began to focus on the effects of integration. As cited by Sheare (1974), Johnson (1950) found that nonacceptance of mentally retarded children in regular classes was due to their deviant social behaviour and not to academic incompetence. Lapp (1957) reported that integrated EMR students were "isolated" from their peers (p.678). Baldwin (1958) indicated that the acceptance level of integrated EMR students was "significantly lower" than regular peers (Reese-Dykes & Stokes, 1978, p.356). Jaffe (1966) found that high school seniors exhibited more negative attitudes toward peers who were labelled mentally retarded than toward those not labelled. Willey (1966) also found negative stereotypes toward special class students (Sheare, 1974).

Renz & Simenson's (1969) study seemed to be the beginning of changes in research results. This study contradicted all previous findings as they found no

difference in the social perception and attitudes of regular students toward their special-class EMR peers; nor, were they found to be rejected by regular class students.

However, in 1972, Goodman, Gottlieb & Harrison's findings again supported the type of results obtained prior to those found in Renz & Simenson's (1969) controversial study. They studied 36 regular students in a nongraded elementary school to determine whether different educational models had an effect on attitudes toward EMR subjects. Using the "Peer Acceptance Scale", a sociometric instrument, the students rated names of regular peers and of integrated and segregated EMR peers. The ratings were; "friend", "alright" and "wouldn't like" (p.414).

Their results indicated that:

- (a) regular students accepted EMR students less often and rejected them more often than they did other non-EMR students;
- (b) whether integrated or segregated, younger regular students were more accepting of the EMR students than older regular students;
- (c) males expressed more overt rejection than females; and

(d) integrated EMR's were rejected more often than segregated EMR's by male raters, but not by female raters (p.416).

Like Renz & Simenson's (1969) study, Sheare's (1974) study also contradicted previous studies which claimed that integrated mentally retarded students were rejected by peers. It was designed to ascertain whether acceptance of EMR students would increase with regular class integration.

The hypotheses were: (1) that integration "in and of itself" would "result in more positive ratings of EMR children" (p.680); and (2) that the sex of the rater would not be a factor in acceptance. The subjects were 400 (200 male, 200 female) junior-high-school students from three schools, each having 30 EMR students in a special class. The experimental group subjects had direct contact with the EMR students, while the control group subjects did not. Sheare administered a 3-point scale (agree, disagree, undecided), containing 25 items (12 positive, 13 negative) set up as opinion statements. Positive responses scored as 3 and the range of possible scores was 25 to 75.

The results of a 3-way analysis of variance (ANOVA) revealed that the main effects for treatment and sex

were significant ($p < .01$). The main effect for school and all interactions were not significant ($p = .681$).

That is, the experimental groups evidenced a greater degree of acceptance than did the control groups and that females evidenced a greater degree of acceptance than did males.

Sheare's speculation as to the reasons for the differences in acceptance level of the males and of the females in the study centered on differences in maturation and tolerance levels between adolescents. He suggested that further research, specifically an attempt at replication of his findings, be conducted.

In 1975, Gottlieb stated that most research on peer attitudes toward the mentally retarded has focused on mildly retarded children within a school context and that these studies have usually employed sociometric attitude scales. He explained that some of the early studies employed sociometric scales tapping the "conative component" of an attitude ($p.109$), which concerns behavioural intentions (Gottlieb & Gottlieb, 1977); while other studies focused on the "cognitive component" of an attitude, "which concerns verbal expressions of perceptions, beliefs, and/or stereotypes" (Gottlieb & Gottlieb, 1977, $p.65$).

Although some results corroborated the prevalent conclusions that mentally retarded children were not accepted socially in the mainstream, other results contradicted it because "most sociometric studies are conducted primarily to obtain a ranking of the social position of the retarded child" (Gottlieb, 1975, p.109) and do not measure actual attitudes toward them.

Due to attempts at integration, the trend in the early 1970's was to determine whether EMR children would be better accepted in regular classes or in special classes within the regular school. At this point in time, developmentally handicapped children (i.e.--moderately and severely mentally handicapped) were still in segregated schools and not the subject of research with regard to mainstreaming.

Gottlieb's (1975) review of the literature found that there was no difference in the level of acceptance of EMR's. The mentally retarded children were still accepted significantly less often than nonretarded children (p.110) regardless of class placement. Furthermore, this situation was prevalent regardless of the type of educational model used (p.110).

Gottlieb (1975) also explained that in contrast to sociometric studies, attitudinal studies usually

ask that the subject express his feelings about mentally retarded children in general. They are more varied than sociometric studies in terms of dependent measures and in terms of their response formats.

In 1977, Gottlieb & Gottlieb, still not satisfied with recent research findings that were "confusing and often contradictory" (p.65), set out to investigate differences in the conative and cognitive components of attitudes with reference to both mentally retarded and physically handicapped children.

The purpose of the study was twofold. First, they sought to discover whether physically handicapped children were rated more favorably than mentally retarded; and second, they sought to clarify whether the rater's sex had an effect on the rating.

The subjects were 56 (28 male, 28 female) junior-high-school students from a low socioeconomic status (SES) background, who were all reading below grade level.

The experiment was conducted as though it was part of a regular English curriculum. The students were given two questionnaires, two days apart. The first was an adjective checklist with 29 items (14 positive, 15 negative) and the second was a social-

distance scale (a modification of Bogardus, 1933) (p.67).

The results indicated that regardless of the sex of the rater or of the handicapped child being rated, the rating of the physically handicapped child was consistently more favourable than that of the mentally retarded child. No other significant effects were found, nor were significant effects found for the social-distance scale. Thus, no correlation was found between the two components of attitudes toward handicapped children.

Bricker (1978) cited the President's Committee on Mental Retardation (1976) report as stressing public enlightenment and integration as leading to the formation of more positive attitudes. She stated that empirical support was still "limited and conflicting" (p.6). Fortunately, subsequent studies were conducted, some in response to the conflicting results of others.

Reese-Dukes & Stokes (1978) undertook a sociometric study to determine:

- (a) differences in sociometric ratings of EMR and non-EMR students;
- (b) differences in male/female ratings; and
- (c) differences of EMR students' ratings by opposite sex classmates (p.357).

They cited Baldwin's (1958) study of social position of regular class EMR students as related to special class students, which found that regular class EMR students were not accepted. This strengthened Reese-Dukes & Stokes position of maintaining segregated classroom placement for EMR students.

They studied the responses of 64 fifth and sixth grade students (32 EMR and 32 regular) on a sociometric questionnaire, "How I Feel Toward Others", (by Bonney, 1954) (p.358), which measured the reputation of an individual within a group.

The results indicated that both male and female students gave lower ratings to opposite sex students than to students of the same sex in regular and EMR groups.

From this, Reese-Dukes & Stokes maintained that regular class integration did not enhance social acceptance of EMR students. The authors of this study were fully aware that sociometric measurement was (and is) not as reliable as other instruments, such as Likert-type rating scales as used in subsequent studies.

To briefly summarize, research results from the 1950's to almost the 1970's indicated that integrated EMR students were not accepted by their peers. In

1969, Renz & Simenson's results contradicted all earlier findings, but, this was not a change that would endure as findings, subsequent to Renz & Simenson's, supported earlier conclusions that EMR students were not accepted in the mainstream. No clear picture had emerged from years of research. To further complicate the situation, integration of handicapped students was now also including the developmentally handicapped as a result of legislation. This would only further complicate an already confusing situation in terms of whether or not these students would be accepted by peers.

Pertinent Studies

The following two studies have provided the framework and the reasoning for the present study. Like this investigator, Voeltz (1980) believed that due to legislated mandates for mainstreaming, which went into effect in the United States (PL 94-142) before Bill 82 did so in Ontario, attention should be focused on children's attitudes toward their developmentally handicapped peers with whom they are now sharing their schools.

Voeltz's study (1980) was conducted partly in response to Jones (1972) opinion and teacher reported

data that nonhandicapped children exhibit verbal cruelty toward handicapped children. She stated that empirical data on the amount and nature of such behaviour by children does not exist (p.455), and posited that the discrepancy was due to the fact that other research has focused only on mildly impaired individuals (EMR's). Therefore, the purpose of Voeltz's study was to explore the existing attitudes of regular students toward their developmentally handicapped peers.

The study took place in Oahu, Hawaii with 2,392 elementary school children, grades two through seven. All were ethnically and socioeconomically heterogeneous. There were three contact level groups: no contact, which did not have any developmentally handicapped students; low contact, which had a short duration of integration (one semester); and high contact, which had developmentally handicapped students for a longer duration (more than one year).

Voeltz developed a three point attitude survey on which a separate validity and reliability study was conducted by Roof (1979) (For a further discussion of the development of the scale, see chapter 3, Instrument).

The scale consisted of 27 items; 21 acceptance

items, 2 comprehension items and 4 classroom rules, inserted to indicate "social-desirability responding" (p.457). Scoring range was from 0-42, a negative response receiving 0, a maybe response receiving 1 and an accepting or positive response receiving 2.

The scale was factor analyzed using principal ~~factoring~~ with iteration and varimax rotation which extracted four factors with loadings greater than .30. Factor scores were computed and used as dependent measures in separate univariate ANOVAS with sex, grade and contact as classification variables. Voeltz noted that the subjects disagreed with the use of the words "sissy" and "dummy" in the survey. This implies the basis of accepting attitudes toward the handicapped. as the subjects appeared to exhibit a protective-type response to perceived name-calling.

The four factors identified were:

1. social contact willingness;
2. deviance consequence;
3. actual contact, type A; and
4. actual contact, type B.

Factor 1 items represented willingness and desire for contact with the handicapped. The significant interactions were: grade x sex, grade x contact and

v

sex x contact. All main effects were significant at .001 level. The highest scores were obtained by grade six females.

Factor 2 reflected attempts to maintain distance from the handicapped and a disapproval of so-called "deviant" behaviour. Only the grade x contact interaction was significant. Grade two and three students scored low across all contact levels. All main effects were significant with upper elementary age children, girls, and high contact groups.

Factors 3 and 4 reflected actual contact respectively representing contact with mentally retarded children and with children in wheelchairs and was consistent with expectations-i.e.--that high contact received high scores and that low contact received low scores.

In her discussion Voeltz postulated that the high scoring given by high contact fifth and sixth grade girls could have been stereotypic and a result of modelling of the verbal behaviour by teachers. As well, she stated that asking a child to consider social situations (eg.-being good friends with a mentally retarded student) without the actual situational demands might have been unrealistic. However, Voeltz had already

determined these subjects to be in the high contact group, thus providing them with legitimate interaction opportunities with the handicapped.

Voeltz addressed the high deviance consequence scores (Factor 2) by suggesting that through their own experience, children expect negative consequences or punishment for inappropriate social behaviour. Thus, children respond negatively to social deviance exhibited by handicapped peers. Voeltz further stressed that not only do the handicapped students require social skills training to reduce unacceptable behaviour, thereby increasing social status, but, that the regular students require instruction in the exceptions of when one is and is not punished for inappropriate social conduct. She stated that, from their own experience, children expect negative consequences to follow inappropriate behaviour and apply such behaviour codes to handicapped children as well.

Voeltz encountered some problems with the results of her study to which she attributed the intervening variables such as differences in socioeconomic status and cultural heterogeneity. To this she suggested replication, which led to the Towfighy-Hooshyar & Zingle study (1984), which the present study parallels.

The Towfighy-Hooshyar & Zingle (1984) study was designed to further explore the dimensions of attitudes toward the handicapped that Voeltz (1980) identified. Specifically, to explore:

- (1) what influences attitudes;
- (2) what factors are associated with behaviour;
and
- (3) the context where interaction occurs.

There were 240 subjects (131 female, 109 male) from four schools with integrated populations, 20 from each grade two, four and six. The students were socioeconomically homogeneous; all being from middle class environments.

The subjects in two of the four schools had been with integrated handicapped peers two years longer and had received preparation for mainstreaming, while the other two schools had little or no preparation. Like Voeltz (1980) these were called high and low contact groups, but, in this study there was no control group.

After conducting a pilot study with 12 students the 29 item questionnaire was administered to the subjects. The authors modified Voeltz's (1980) questionnaire by rephrasing some items that presented a problem for Voeltz and added two new items. A positive response

scored 3, an intermediate response scored 2, and a negative response scored 1; thus a high score would reflect a positive attitude.

Factor analysis including factoring with iteration and varimax rotation revealed four dimensions with factor loadings greater than .30. The four factors identified were:

1. casual contact;
2. contact desire;
3. deviance tolerance; and
4. peer acceptance.

A three-way ANOVA was computed for grade, sex and contact for each factor.

Factor (or dimensions, as termed in this study) 1 items (except one) were verbal items in nature and reflected spontaneous casual contact with the handicapped. Contact was the only main effect in schools with longer duration of integration ($p < .0001$).

Factor 2 represented wishes and desire for contact with handicapped peers. The main effects were for grade ($p < .05$) and for sex ($p < .01$). No significant interactions were found for sex, grade and contact. More desire was evidenced for girls.

Factor 3, measured the degree of tolerance for

"deviant" behaviour. Only the grade x contact interaction was significant ($p < .01$). This implies that deviance tolerance increased from lower to higher grades in low contact cases, while in high contact cases the only difference was between grade two and all other grades.

Factor 4 represented "sustained" interaction requiring physical contact. There were no significant interactions. The main effects were for grade ($p < .05$) and contact ($p < .01$). Peer acceptance increased with contact.

As intended, this study showed the multidimensionality of attitudes. The effects of variables were different for different dimensions with contact being the main variable affecting the dimensions, except contact desire, where sex played a larger role. For the low contact groups, deviance tolerance increased gradually from one grade to another. For the high contact group there was an initial increase in deviance tolerance from the second to the fourth grade, but, there was no difference from grade four to grade six. Also for the high contact groups the second and fourth graders had a higher level of deviance tolerance than did the low contact grades two and four, not six.

This study showed that the type of integration has a greater influence on younger students than on older ones. (See Table 1 for an overview of all related and pertinent studies).

In summary, there is an abundance of research, spanning several decades, which addresses the acceptance (and nonacceptance) of mildly mentally retarded (EMR) children who are integrated into regular schools and classrooms. There is, however, little research which addresses the attitudes toward developmentally handicapped children which affects acceptance or nonacceptance. This is a current problem as a result of recent provincial legislation which mandates that regardless of a child's level of mental or physical capability that he/she has the right to be educated in the regular school system (Bill 82, Canadian Charter of Rights and Freedoms). With the closure of special schools for the moderately and severely mentally handicapped, the integration of these developmentally handicapped pupils into regular schools and the accompanying modifications, there is a need to determine whether developmentally handicapped children will be accepted and what kinds of attitudes the regular students hold. Hence, the reason for this study at this point

in time. The intention is to examine whether there are differences in attitudes between students in schools with mainstreamed developmentally handicapped students and those without; whether there are differences between younger and older elementary students in their attitudes toward the developmentally handicapped; and whether any sex differences will be exhibited in the attitudes of regular students toward these new peers.

TABLE 1-SUMMARY OF ATTITUDE STUDIES

AUTHOR	SAMPLE	RESULTS
Johnson (1950)	698 regular students in schools with integrated mentally retarded (sociometric questionnaire)	nonacceptance found due to deviant social behaviour not academic incompetence
Lapp (1957)	290 regular students in schools with integrated mentally retarded (sociometric questionnaire)	significantly lower acceptance scores for mentally retarded
Baldwin (1958)	574 regular students in schools with integrated mentally retarded (Ohio Social Acceptance Scale)	segregated status maintained
Jaffe (1966)	high school seniors (sociometric questionnaire)	negative attitudes toward mentally retarded labelled as such
Willey (1966)	regular students in schools with special classes (measure not stated)	negative stereotypes toward special class peers
Renz & Simenson (1969)	14 regular students in schools with special class EMR's (measure not stated)	<u>not</u> rejected by peers
Goodman, Gottlieb & Harrison (1972)	36 regular students in a nongraded school with both integrated and segregated EMR's (sociometric Peer Acceptance Scale)	integrated and segregated students were rejected; integrated more often than segregated by males, but not by females; younger students more accepting of EMR's than older students

AUTHOR	SAMPLE	RESULTS
Sheare (1974)	400 regular students with and without integrated EMR's (acceptance scale)	integrated EMR's better accepted; females were more accepting than males
Gottlieb & Gottlieb (1977)	56 regular students in nonintegrated schools questioned about mentally retarded and physically handicapped children (measure not stated)	crippled children rated more favorably than mentally retarded; no sex differences
Reese-Dukes & Stokes (1978)	32 regular students in schools with integrated EMR's (sociometric questionnaire)	EMR's received significantly lower ratings than normal peers
Voeltz (1980)	2,392 regular students in schools with integrated mentally retarded -none, low and high contact levels (acceptance scale)	4 factors underlying attitudes revealed: social-contact willingness, deviance consequence and two actual contact dimensions; high contact groups and upper elementary females were most accepting
Towfighy-Hooshyar & Zingle (1984)	240 regular students in schools integrated mentally retarded -high and low contact groups (acceptance scale)	4 dimensions of attitudes revealed: casual-contact, contact-desire, deviance-tolerance and peer-acceptance; acceptance increased with contact; type of integration influences younger students more

Sources: Gottlieb (1975)
Horne (1985)
Reese-Dukes & Stokes (1978)
Sheare (1974)
Towfighy-Hooshyar & Zingle (1984)
Voeltz (1980)

The design of this study parallels the Voeltz (1980) and the Towfighy-Hooshyar & Zingle (1984) studies and will attempt to extend their results by identifying similar factors or dimensions of attitudes. As previously pointed out, this author believes that peer attitudes are the key to success in mainstreaming. Peer attitudes can either exacerbate a negative school environment, where teachers, school personnel and social attitudes already play an important role, or, peer attitudes can facilitate a positive school environment for all.

It should be the desire of all those involved in education to create an optimal learning environment, academically and socially, for handicapped and nonhandicapped alike.

The research hypotheses are:

1. The younger students (grade 1's and 3's) will have less negative attitudes toward their developmentally handicapped peers than will the older students (grade 5's and 7's).
2. The experimental group (with mainstreamed pupils) will have less negative attitudes toward their developmentally handicapped peers than will the control group (without mainstreamed pupils).
3. There will be a difference in the attitudes of male and of female subjects.

CHAPTER III

METHOD

Subjects

Sixteen groups, consisting of four grades (1, 3, 5, 7) from each of the four schools surveyed, were administered the questionnaire.

Eight of the groups contained students from schools with mainstreamed developmentally handicapped students (experimental groups) and the other eight groups contained students from nonmainstreamed schools (control groups).

All four schools were located in close proximity to one another, thus ensuring a similar socioeconomic status and a similar background among the subjects.

As well, all schools used were members of the same school board in a Southwestern Ontario city.

The total number of subjects was 274.

Instrument

The questionnaire used was taken from the modified version (Towfighy-Hooshyar & Zingle, 1984) of Voeltz's (1980) Acceptance Scale. (See Table 2).

Voeltz developed the questionnaire incorporating elements of the E-scale (to measure ethnocentrism,

by Adorno, Frenkel-Brunswik, Levinson & Sanford, 1964) and the C-scale (to measure conservatism, by Lapsley & Enright, 1979; Wilson & Patterson, 1968). This was done to ensure that "cognitive level, grammatical complexity, task conflict and social desirability" (Voeltz, 1980) would not interfere with the effectiveness of the questionnaire.

Only the valid items from the modified questionnaire as used by Towfighy-Hooshyar & Zingle (1984) were used bringing the total number to 23 (from 29). Table 3 outlines the differences between the questionnaires and the designs of the three studies.

The items were arranged and phrased in a varying manner to avoid repetitive positive or negative responses. Three responses were possible for each item: yes, no and not sure (this was changed from agree, disagree and undecided which appeared on the other two versions of the scale, so as to minimize possible confusion among the younger subjects). No such confusion was exhibited.

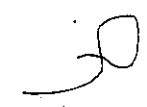


TABLE 2-ACCEPTANCE SCALE

Teacher's Name _____ Grade _____ Sex: M, F

Yes No Not Sure

1. I have helped some students in wheelchairs.
2. I have talked with some mentally retarded students at my school.
3. I have talked to some students in wheelchairs.
4. I wish I could play with some mentally retarded students.
5. I would like my class to go to camp the same week that a class of handicapped kids was there.
6. If I had a retarded brother or sister I wouldn't tell anybody.
7. I get embarrassed when I talk to someone who is crosseyed.
8. It's okay to call someone a sissy if they cry a lot for no reason.
9. I have played on the playground with some mentally retarded students.
10. I have made friends with a mentally retarded student.
11. I would like to have children who are retarded in my room at school.
12. It is a good idea to have deaf kids in school with kids who can hear.
13. I have talked with some physically handicapped students at my school.

[illegible]

- 2 -

14. I really don't like to sit next to someone in the lunchroom who is handicapped.
15. I have talked with some handicapped students outside of my school.
16. If a kid has a physical handicap he/she should be called mentally retarded.
17. If someone told me about a new t.v. show on Saturday morning about handicapped kids, I would watch it if I could.
18. I think I could be good friends with a special education student.
19. Kids who talk funny so I can't understand them very well shouldn't be in my group in school activities.
20. If there are too many kids in my room who have trouble with math and reading, my teacher won't have time for me and my friends.
21. Kids who talk to themselves a lot are scary. I don't like to be close to them.
22. I don't say hello to kids who are retarded.
23. If another kid can't do something or does something wrong, he can expect to be called a dummy.

[illegible]

TABLE 3-ACCEPTANCE SCALE AND DESIGN COMPARISON

Areas of Comparison	Voeltz, 1980	Towfighy-Hooshyar & Zingle, 1984	Nardone, 1987
Subjects	2,392 culturally and socio- economically heterogeneous	240 homogeneous	274 homogeneous
Contact levels	high, low, none	high, low	experimental, control (contact, no contact)
Number of questions (items, variables)	27	29	23
Coding	0-negative 1-maybe 2-positive	1-negative 2-maybe 3-positive	1-negative 2-not sure 3-positive

Procedure

Permission to conduct the study was obtained from the school board and from the principals of the four schools.

Prior to the administration of the questionnaire, the students who had received parental permission to participate in the study were re-briefed as to the nature of the task. The initial briefing took place when the permission slips and letters of explanation were sent home to parents approximately one week earlier (see Appendix 1).

Beginning with grade one in school A (experimental) the students were sent individually to a room where the experimenter first chatted briefly to put them at ease, then read and interpreted each item of the questionnaire to them. Terms were explained as were hypothetical situations in the questionnaire. As well, the subjects were asked whether or not they understood the question. If not, it was explained again. The subjects were also told that nobody else (eg.-their teacher) would see their responses. The experimenter then placed checkmarks in the appropriate response column for the subjects.

The same procedure was employed for all grade

one's and three's in all four schools. For the grade five's and seven's the experimenter gave a similar re-briefing, then read the questionnaire aloud and interpreted the questions in the same manner as that used with the grade one's and three's, but, to the class as a whole. The subjects then completed their own questionnaires.

Data collection took four days--one day per school.

After the data was collected it was hand coded by the experimenter. A "positive" response scored three, a "negative" response scored one and a "not sure" response scored two, thus, a high score reflected a positive attitude.

The SPSS-X-statistical program was used and statistical procedures employed include factor analysis, to identify relationships among the groups and analysis of variance, to identify differences between the groups.

CHAPTER IV

RESULTS AND DISCUSSION

Results

Factor analysis employing principal factoring with iteration and varimax orthogonal rotation revealed six factors with loadings greater than .30. These six factors accounted for 54.2% of the total variance. However, for interpretive purposes, since factors five and six each contained only two variables, which were extensions of the type of variable present in factor 2, they were incorporated there. The result then was the following four factors:

1. direct contact;
2. avoidance tendency;
3. contact desire; and
4. casual contact acceptance (see Table 4).

A three-way multivariate analysis of variance (MANOVA) with classification variables of sex, grade and exposure (contact) was conducted on each factor. A subsequent two-way MANOVA using the variables grade and exposure was also conducted as there were no significant interactions or effects revealed for sex. (See Table 5). As the MANOVA yielded an overall significant interaction

TABLE 4-FACTOR LOADINGS OF ACCEPTANCE SCALE

VARIABLE	1	FACTOR 2	3	4
1	.65787			(.33024)
2	.76186			
3	.76644			
4			.70292	
5			.68054	
6		.55883		
7		.66297		
8		.69083		
9	.70201			
10	.69706			
11			.75147	
12				.65160
13	.79164			
14		.64568		
15				.65878
16		.58853		
17			.41406	
18			.64530	
19		.48039		
20		.51651		
21		.58576		
22		.60215		
23		.59198		

-Factors loaded >.30

-Second loadings in brackets

-Factor 1-direct contact; Factor 2-avoidance tendency;

Factor 3-contact desire; Factor 4-casual contact acceptance.

TABLE 5-MANOVA RESULTS

1. EFFECT - GRADE X CONTACT (INTERACTION)

A. MULTIVARIATE

<u>TEST</u>	<u>VALUE</u>	<u>APPROX. F.</u>	<u>HYP. D.F.</u>	<u>ERROR D.F.</u>	<u>SIG. OF F.</u>
WILKS	.83264	2.76	18	779	.000*

B. UNIVARIATE F-TESTS

<u>VARIABLE</u>	<u>APPROX. F.</u>	<u>HYP. D.F.</u>	<u>ERROR D.F.</u>	<u>SIG. OF F.</u>
F4	6.06	3	266	.001*

*SIGNIF. AT (.05) LEVEL

2. EFFECT - EXPOSURE (MAIN EFFECT ONE)

A. MULTIVARIATE

<u>TEST</u>	<u>VALUE</u>	<u>APPROX. F.</u>	<u>HYP. D.F.</u>	<u>ERROR D.F.</u>	<u>SIG. OF F.</u>
WILKS	.70146	18.51	6	261	.000*

B. UNIVARIATE F-TESTS

<u>VARIABLE</u>	<u>APPROX. F.</u>	<u>HYP. D.F.</u>	<u>ERROR D.F.</u>	<u>SIG. OF F.</u>
F1	81.26	1	266	.000*
F2	13.01	1	266	.000*

*SIGNIF. AT (.05) LEVEL

(table continues)

TABLE 5-(CONTINUED)

3. EFFECT - GRADE (MAIN EFFECT TWO)

A. MULTIVARIATE

<u>TEST</u>	<u>VALUE</u>	<u>APPROX. F.</u>	<u>HYP. D.F.</u>	<u>ERROR D.F.</u>	<u>SIG. OF F.</u>
WILKS	.47406	12.39	18	738	.000*

B. UNIVARIATE F-TESTS

<u>VARIABLE</u>	<u>APPROX. F.</u>	<u>HYP. D.F.</u>	<u>ERROR D.F.</u>	<u>SIG. OF F.</u>
F1	4.79	3	266	.003*
F2	21.10	3	266	.000*
F3	10.08	3	266	.000*
F4	19.60	3	266	.000*

*SIGNIF. AT (.05) LEVEL

NOTE - only significant results are reported

effect, follow-up univariate F-tests were conducted to determine the individual significance of each factor (See also Table 5). Factor 1 (direct contact) represented a positive attitude and experience due to direct physical and verbal contact with the handicapped. The main effects were for grade and for contact.

Factor 2 represented a negative attitude and an avoidance tendency, as well as negative perceptions and expectations of the developmentally handicapped. The main effects were for grade and for contact. The attitudes of the subjects became less negative as age increased, which implies that acceptance of individual differences increased.

Factor 3 represented a positive attitude with a desire for contact and a positive future outlook. The only main effect was for grade. The younger students were more positive than the older students in their contact desire.

Factor 4 represented a positive attitude and acceptance as related to casual contact with the developmentally handicapped. There was a significant interaction for grade x contact and the main effect was for grade.

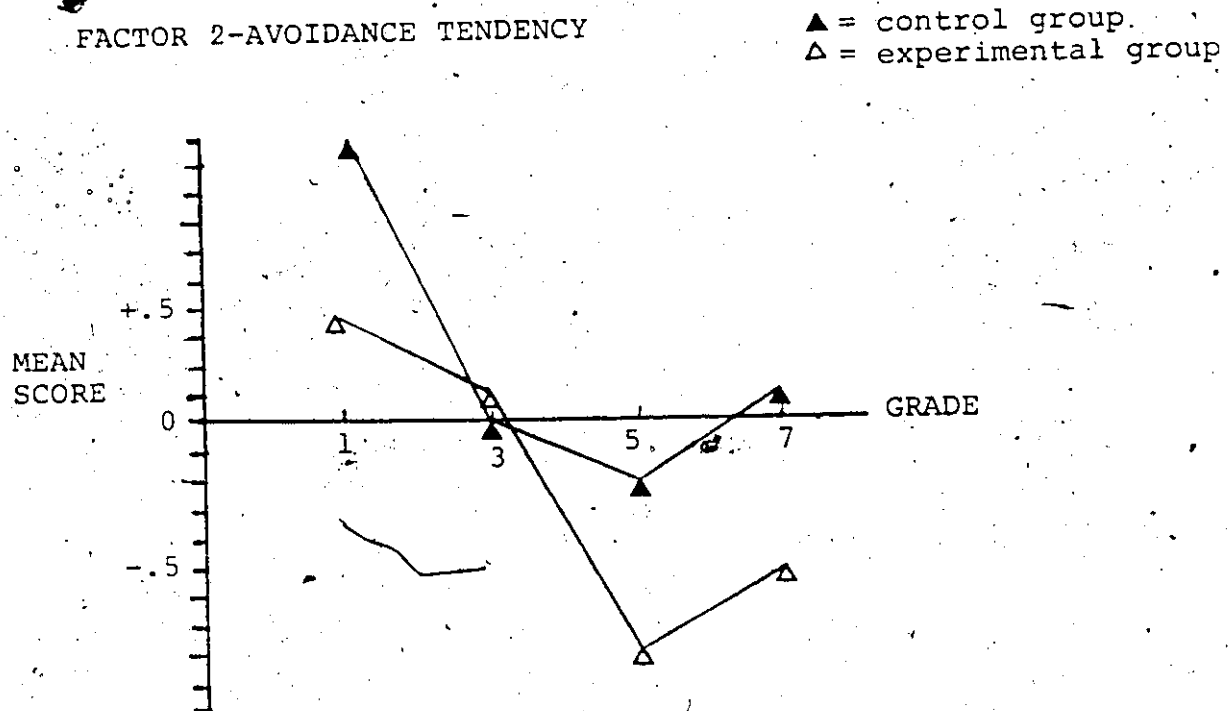
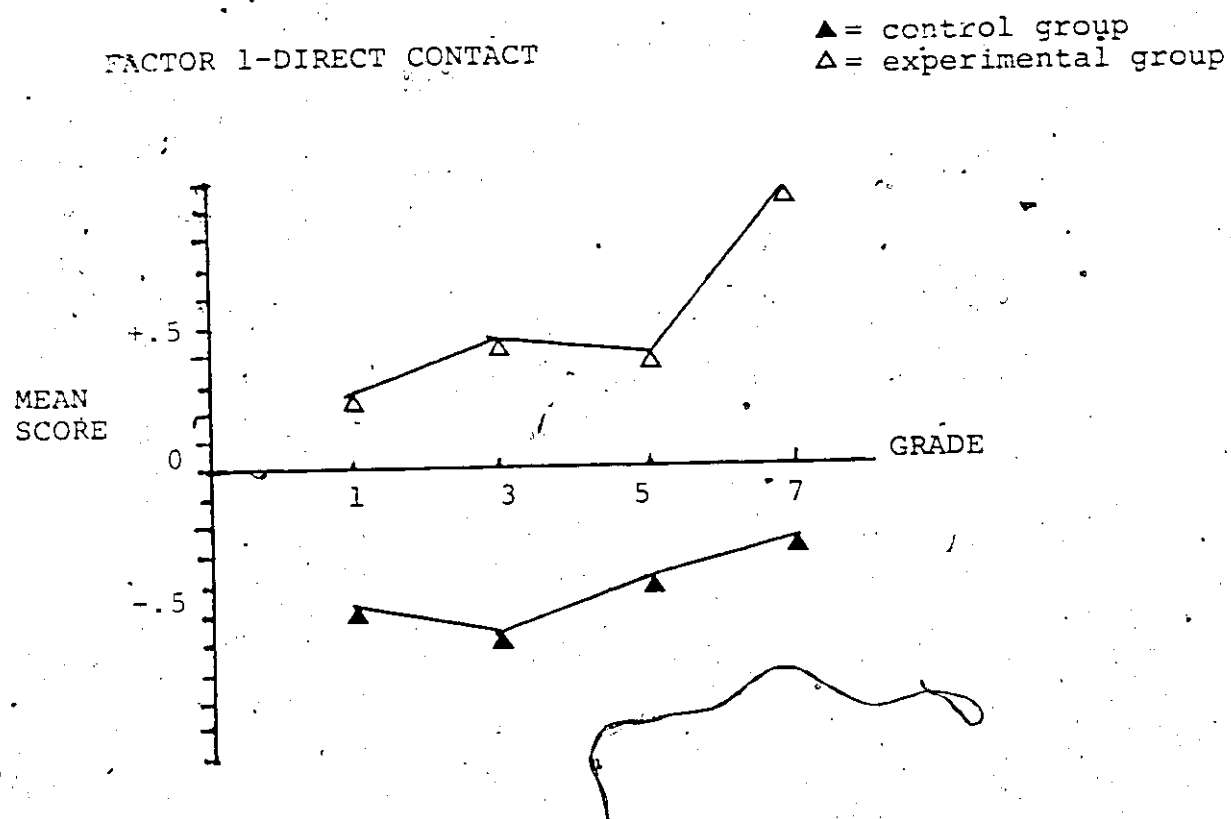
With regard to direct contact (factor 1) both the experimental and the control groups evidenced more positive attitudes as age increased. There was a dramatic increase shown for grade 7's in the experimental condition on this factor.

As age increased, negative attitudes decreased with respect to factor 2 scores, except for grade 7, where scores increased somewhat over those of grade 5 subjects.

Contact desire (factor 3) was similar for both the experimental and the control conditions, with the younger subjects (grade 1's and 3's) evidencing greater desire than older subjects (grade 5's and 7's).

Finally, casual contact acceptance (factor 4) steadily increased through the grades for the control group. There was some variation evidenced in the experimental condition with a decrease at the grade 5 level. (See Figure 4 and Table 6).

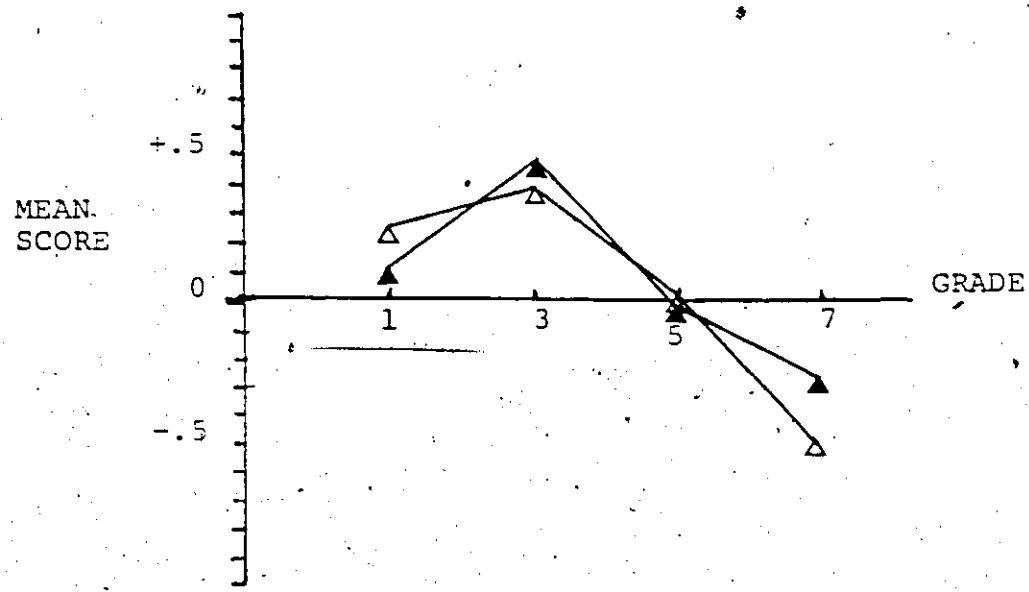
FIGURE 1-GROUP MEANS OF ACCEPTANCE SCALE SCORES



NOTE - For Factor 2 a lower-mean score indicates a less negative attitude

FACTOR 3-CONTACT DESIRE

▲ = control group
△ = experimental group



FACTOR 4-CASUAL CONTACT ACCEPTANCE

▲ = control group
△ = experimental group

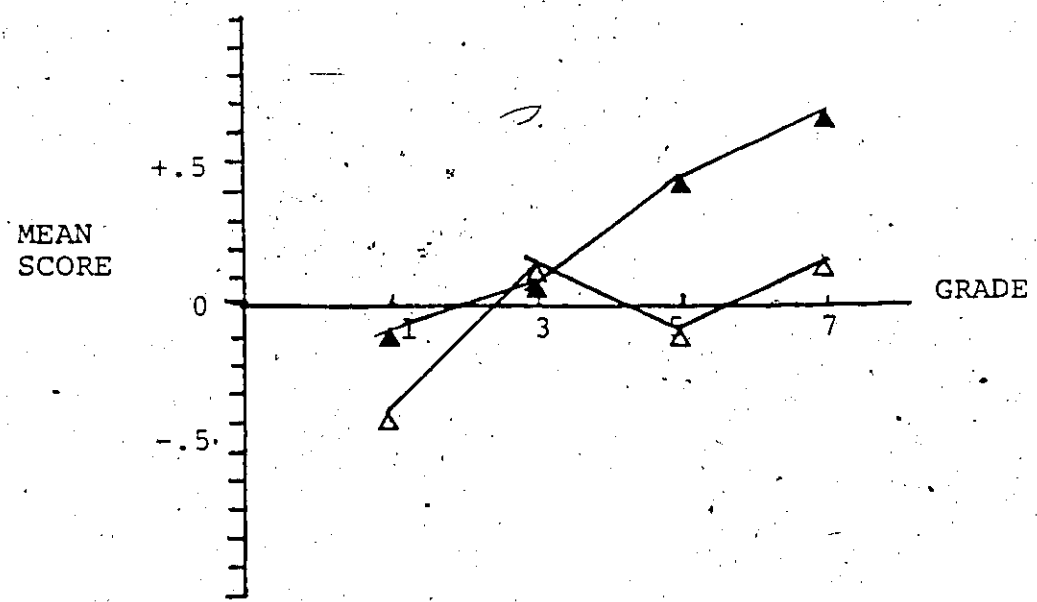


TABLE 6-GROUP MEANS AND STANDARD DEVIATION

FACTOR	CONDITION	MEAN	SD	N
1	Gr 1-control	-.51141	.81193	33
	-experimental	.21730	1.01061	31
	Gr 3-control	-.61124	.89111	38
	-experimental	.40707	.88147	37
	Gr 5-control	-.43616	.87800	34
	-experimental	.34774	.86375	21
	Gr 7-control	-.30653	.90377	40
	-experimental	.95234	.55998	40
2	Gr 1-control	.93964	1.07738	33
	-experimental	.42358	1.41581	31
	Gr 3-control	-.00770	.81307	38
	-experimental	.06894	.84004	37
	Gr 5-control	-.26604	.69517	34
	-experimental	-.80679	.46203	21
	Gr 7-control	.04416	.84093	40
	-experimental	-.55440	.61465	40
3	Gr 1-control	.04841	1.00616	33
	-experimental	.24767	1.07920	31
	Gr 3-control	.45406	.72200	38
	-experimental	.32501	.89528	37
	Gr 5-control	-.08567	.83528	34
	-experimental	-.07145	.71484	21
	Gr 7-control	-.30779	1.09341	40
	-experimental	-.54576	1.10790	40
4	Gr 1-control	-1.00763	1.12776	33
	-experimental	-.42330	1.04100	31
	Gr 3-control	.02998	.91795	38
	-experimental	.06039	.84303	37
	Gr 5-control	.42613	.88755	34
	-experimental	-.13769	.82814	21
	Gr 7-control	.65889	.70965	40
	-experimental	.12620	.71382	40

Discussion

As the present study was an attempt to extend the results of two previous studies (Voeltz, 1980 and Towfighy-Hooshyar & Zingle, 1984) it was conducted in a parallel manner. The questionnaires, the procedures and the statistical analyses were the same for all three studies.

The results of the present study were generally consistent with those of the two previous studies, with one exception. In the present study the sex of the subject did not have any significant effect on the results. This finding conflicts with those of both Voeltz and Towfighy-Hooshyar & Zingle, who found females to be more accepting than males. Interestingly, the effect of sex differed greatly in the three studies. In Voeltz's study sex played an important role in all four dimensions (factors). In Towfighy-Hooshyar & Zingle's study, four years later, sex had an effect only in the casual contact dimension, where students expressed desire for contact with the handicapped. In the present study, there was no effect for sex.

Towfighy-Hooshyar & Zingle speculated that the difference between their results and Voeltz's results may have been due to sociocultural differences in

Canadian and American societies (p.636). However, the results of the present study indicate that a trend of gradual decrease in sex differences exists, to the point of extinction at present. This position has been substantiated by research results obtained by Rapier et al (1972) and by Voeltz (1982) in a follow-up to her initial (1980) study in this area. Both of these studies revealed that sex differences disappear after integration experiences. The conclusions from the Rapier et al (1972) study suggested that attitudes are changed in a positive manner as a result of integration; that handicapped children are perceived as less weak and less in need of assistance; that sex differences decreased significantly as a result of integration and; that integration increased the differences in attitudes toward the handicapped between younger and older students, making the older students more "realistically" aware of handicaps (p.222).

Although the 4 factors revealed in the present study represent the same concepts as those revealed in the previous two studies (Voeltz, 1980 and Towfighy-Hooshyar & Zingle, 1984), they were, however, not represented in the same order. Table 7 illustrates how the factors, each representing a different dimension of attitudes, correspond to each other.

Voeltz's factor 1, which represents the subject's willingness for social contact with the handicapped, corresponds to Towfighy-Hooshyar & Zingle's factor 2, called contact desire. These correspond to factor 3 in the present study. Voeltz found significant interactions for grade x sex, grade x contact and sex x contact. Towfighy-Hooshyar & Zingle found main effects for grade and sex and the present study found a main effect for grade.

Factor 2 in Voeltz's study is termed deviance consequence and corresponds to Towfighy-Hooshyar & Zingle's factor 3, called deviance tolerance. In the present study these correspond to factor 2, called avoidance tendency. In all cases this factor represents questionnaire items dealing with the reactions of the subjects to behaviour by the developmentally handicapped students which may be seen as "deviating" from the norm. These questions tended to elicit a reaction, which, in many cases implied avoidance (eg.-items 14 and 21 of the Acceptance Scale, see Table 2).

TABLE 7-FACTOR CORRESPONDENCE

STUDY -	Voeltz, 1980	Towfighy-Hooshyar & Zingle, 1984	Nardone, 1987
FACTORS	1-social contact willingness	2-contact desire	3-contact desire
	2-deviance consequation	3-deviance tolerance	2-avoidance tendency
	3-actual contact type A	4-peer acceptance	1-direct contact
	4-actual contact type B	1-casual contact	4-casual contact acceptance

Voeltz reported a significant grade x contact interaction as did Towfighy-Hooshyar & Zingle. The present study found main effects for grade and contact.

Voeltz's factor 3 is called actual contact, type A and refers to direct contact with developmentally handicapped children. It corresponds to Towfighy-Hooshyar & Zingle's factor 4, peer acceptance and to factor 1, direct contact, in the present study. Voeltz found a main effect for contact, while both the Towfighy-Hooshyar & Zingle study and the present study reported main effects for grade and contact.

Finally, factor 4 in Voeltz's study, actual contact type B, refers to contact with children in wheelchairs. It corresponds to factor 1, casual contact in the Towfighy-Hooshyar & Zingle study and to factor 4, casual contact acceptance in the present study. Both Voeltz and Towfighy-Hooshyar & Zingle reported a main effect for contact, while the present study found a significant grade x contact interaction as well as a main effect for grade.

In Voeltz's study contact was one variable that was strongly associated with accepting responses on factor 1 (factor 3 in the present study), regardless of age. This was not so in the present study as younger subjects evidenced a higher degree of contact desire.

than did older subjects. This may be a result of older subjects' more "realistic" awareness of handicaps. One may surmise that a realistic awareness of handicaps may be the reason for less desire to engage in interaction, while not necessarily resulting in less positive attitudes toward the handicapped in general.

Hypothesis number 1, which states that the younger students, specifically the grade 1's and 3's, would have less negative attitudes than the older students, those in grades 5 and 7, was rejected. This was originally hypothesized for two reasons. First, some previous research had concluded this (Goodman, Gottlieb & Harrison, 1972) and second, one may speculate that since younger children have not been exposed as fully to the attitudes of parents, teachers and society itself as have older students, and thus, not been negatively influenced that they would be more receptive to the handicapped as peers.

This, however, was not the case in the present study. With regard to direct contact with the handicapped (factor 1) attitudes became more positive as age increased, especially for the experimental condition. As well, as age increased there was less of a tendency to avoid the handicapped as evidenced

by factor 2 scores. Finally, the degree of casual contact acceptance also increased with age, except for grade 5 of the control condition. This was the only exception. Thus, in three of the four factors, older students held more positive attitudes than younger students. This is a good sign in terms of general acceptance of the handicapped. As a result of exposure these older students will go into adulthood with positive attitudes and it is to be hoped that they will be representative of society at large. As well, one must hope that the younger students' attitudes will become more positive as they grow older as they did evidence greater contact desire than older students. This would be an interesting extension of the present study; to compare the younger students' present study responses with responses from the same students several years hence to determine if they will, in fact, become more positive as a result of prolonged exposure to the handicapped.

Hypothesis number 2, which states that the experimental condition (with mainstreamed students) would have less negative attitudes than the control condition (without mainstreamed students) was supported (accepted) in two of the four factors. It was strongly

supported in the case of direct contact, factor 1, and strongly supported in the case of avoidance tendency, factor 2. With regard to factors 3 and 4, contact desire and casual contact acceptance, there was a very slight difference between the experimental and control conditions, with the experimental condition slightly lower than the control condition at times. This can be explained if one considers that the younger students generally had a high contact desire, whether they were in the experimental or the control condition.

Furthermore, the questionnaire items that contributed to these two factors represented general hypothetical situations in which the subject indicated whether or not he/she would like to associate with the handicapped.

Here, the actual effect of exposure is not evident and thus, differences in the two treatment conditions should not have been great. One would assume that the control subjects would have a basic familiarity with developmental handicaps (which they confirmed when asked by the experimenter). As such and through media exposure of mainstreaming efforts throughout Ontario, these subjects should naturally be curious to know what it would be like to interact with the handicapped, thus aligning their responses with those of the subjects in the experimental condition.

Lastly, the third hypothesis, which stated that there would be a difference in the responses between male and female subjects in the study, was rejected.

There was, in fact, no difference between the sexes.

This point has already been addressed and substantiated by other research, and thus, will not be reiterated here.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Conclusions

It is apparent from all three studies that: (a) contact positively influences children's attitudes toward the handicapped; and (b) children's attitudes have definite dimensions, which, are not constant across all situations. Children have different levels of desire for contact, tolerance for unacceptable behaviour and overall acceptance of handicapped peers. Sheare's (1974) statement that integration, "in and of itself" would "result in more positive ratings" does seem to have been supported several times over since 1974. As well, the present study further shows the need for positive interaction experiences to enable children to form positive attitudes on their own, rather than being influenced by others--namely teachers, parents and society.

Voeltz (1982) makes an excellent comment when she points out that we must not overemphasize "helping" those less capable, as do charity-oriented campaigns, as it may foster the negative attitudes that exist. Rather, she contends, that realistic social interaction

patterns that are "mutually reinforcing" should be the aim (p.389). Developmentally handicapped children are in regular schools to stay and the more beneficial the situation is to everyone involved, the better.

Implications

From this study, it is apparent that educators must be aware of the fact that there are dimensions to attitudes, especially in children. It is important to use the knowledge gained thus far in facilitating positive interactions among regular and handicapped children. Yet, one must understand that positive attitudes expressed in one situation do not necessarily carry over to all other situations to the same degree. Although exposure leads to more positive attitudes among children, there may still exist attitudinal barriers, or remnants of previous stereotypes and incorrect beliefs.

Stereotypes are the bases of attitudes and attitudes are learned from experience (Triandis, Adamopoulos & Brinberg, 1984). Children begin to form attitudes around age three or four, when they begin to develop a sense of self and can easily distinguish themselves from others, state Gottlieb, Corman & Curci (1984).

Further they present five factors which they consider to be important contributors to attitude formation:

- (a) heredity;
- (b) physiology;
- (c) parental influence;
- (d) direct experience; and
- (e) social communication (p.143).

Thus, children can enter school with ideas that may be erroneous. It is then in the hands of the educational system to attempt to correct these erroneous beliefs. Yet, how is this to be accomplished since we are unable to legislate acceptance? Early intervention programs are a logical solution for two reasons. First, early intervention has been proven to be quite successful and second, younger students in the present study held more negative attitudes than did older students. Since this finding was contradictory to the author's assumption, it is deemed to be an important area of concentration. The assumption was that younger students would have had less exposure to the negative attitudes of parents, school personnel and society, and therefore, would be more accepting of individual differences. However, such was not the case and the hypothesis was rejected.

Consequently, it is here that intervention could be targeted.

As briefly mentioned earlier, there are programs designed to change attitudes which can be valuable classroom resources. Attitude change is related to the function of attitudes (as discussed in Chapter II) and there are several methods one can utilize. The three most common strategies for attitude change are:

1. information
2. behaviour modification
3. experience (Triandis, Adamopoulos & Brinberg, 1984, p.37).

The information method of attitude change involves exposing the person to a variety of ideas and viewpoints about handicaps. The behaviour modification method involves putting the people in situations where it is easy for them to make a positive response toward a handicapped person and then providing a reward. The experience method involves creating conditions in which the experiences of the individual with a handicapped person would be positive and in and of itself, reinforcing (Triandis, Adamopoulos & Brinberg, 1984, p.37).

Further along this line, Donaldson's (1980) review of research on attitude change toward handicapped persons outlined successful approaches to reducing negative attitudes. These include consideration for the status of the handicapped person in relation to the nonhandicapped, allowance of staring and other discomfort reduction methods initially, and avoidance of inadvertent reinforcement of stereotypes. As well, Banbury (1983) has compiled a comprehensive classroom program for successful mainstreaming. The program contains a wealth of resource materials for the teacher and students in addition to guidelines for implementation, procedures to analyze staff needs and program objectives. A program such as this may provide teachers with ideas and resources that they may not have been familiar with and thus, lead to greater success in mainstreaming.

Similarly, TVOntario has developed a package of lesson plans for use by teachers in developing positive attitudes toward the handicapped. It is entitled "Understanding Children With Special Needs" and contains units for elementary, secondary and adult levels. The adult level is geared toward teacher education, parents and child care workers. All of the lessons

are based on TVOntario programming and are easily incorporated into existing subjects, or, can be taught separately.

A new approach specifically designed for younger students is receiving international attention of late due to its success. The Kids on the Block puppet theatre was developed by Barbara Aiello in Washington, D.C. It consists of a "troupe of disabled and nondisabled puppets" who perform skits written for children in grades two to four. Included in the skits are a discussion of the puppets' handicaps in which factual information is provided in the guise of answers to questions asked by nonhandicapped puppets. The effectiveness of this approach was studied recently by Snart & Maguire (1986). They found that the program had a "significant impact" (p.57) on students by increasing knowledge and creating more accepting attitudes toward handicapped peers.

Educators should try to be cognizant of all of the components which contribute to attitude formation in children, ie.-their position as a role model, the classroom environment they create and the information they impart to students (consciously and, sometimes, unconsciously) about individual differences and

handicaps. In this way the ingredients of successful mainstreaming will be present and, possibly, facilitate the entire process.

In terms of other disability groups, Dubin & Fisher (1982) and Prillaman (1981) have both implemented similar training programs to increase awareness and to facilitate integration of emotionally disturbed and learning disabled students respectively. There is also an abundance of children's literature now available which addresses handicaps and should not be overlooked as a resource for educators. (Greenbaum & Others, 1980, provides an annotated bibliography of children's books about handicapped children.)

Attitude change is a vast area unto itself. This review is by no means comprehensive and not intended to be so. This area is one in which further study is warranted. As well, several other areas of further study can be beneficial to the success of mainstreaming. First, a further extension of the results of the present study is suggested to determine whether the disappearance of sex differences from previous studies will endure. As well, re-surveying the younger students in the present study, three or four years hence, to compare their attitudes then and now would be of great interest to

the author. The answers to questions still being asked about the effects of exposure to the handicapped may be forthcoming at that time. Similarly, further research on the outcome of training programs seems warranted, as some reviewed did not produce any effects on children's attitudes. What would be the reason, or reasons for this, one must query. Is it inadequate training and/or preparation of the teachers, teacher attitudes, ineffective programs, or some combination of the three? All of these areas require further investigation as well. There do not seem to be any simple answers to these timely and pertinent questions as yet.

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